

January 03, 2018



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 9490
(SEVENTH REVISION)

EXPIRATION DATE: 2021-11-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: National Refrigerants, Inc.
Philadelphia, PA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain Division 2.1 and 2.2 gases in non-DOT Specification IMO Type 5 portable tanks. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
 - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR 173.315 in that non-DOT specification portable tanks are authorized for the materials described in paragraph 6 below, except as specified herein.
5. BASIS: This special permit is based on the application of National Refrigerants, Inc. dated November 6, 2017, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR 172.101):

| Hazardous Materials Description | | | |
|---|---------------------------|-------------------------------|------------------|
| Proper Shipping Name | Hazard Class/ Division | Identi- fication Number | Packing Group |
| Dichlorodifluoromethane <i>or</i> Refrigerant gas R 12 | 2.2 | UN1028 | N/A |
| Chlorodifluorobromomethane <i>or</i> Refrigerant gas R 12B1 | 2.2 | UN1974 | N/A |
| 1-Chloro-1,1-difluoroethane <i>or</i> Refrigerant gas R 142b | 2.1 | UN2517 | N/A |
| 1, 1-Difluoroethane <i>or</i> Refrigerant gas R 152a | 2.1 | UN1030 | N/A |
| 1,2-Dichloro-1,1,2,2- Tetrafluoroethane <i>or</i> refrigerant gas R 114 | 2.2 | UN1958 | N/A |
| Dimethyl ether | 2.2 | UN1033 | N/A |
| 1,1,1,2-tetrafluoroethane <i>or</i> refrigerant gas R 134a | 2.2 | UN3159 | N/A |

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification portable tank, mounted in an ISO frame, designed and constructed in accordance with ANF-Industrie drawings nos. 46050.990.014 Rev. A, dated June 11, 1985, and 46050.191.008 Rev. B dated June 3, 1985, and other drawings, technical specifications and calculations on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA), and in compliance with the following:

(1) Code - Complies with DOT Specification 51 except that tanks are not ASME Code "U" stamped and have bottom outlets; IMO Type 5.

(2) Insulation - None. Tanks are equipped with a sun shield.

(3) Water capacity (U.S. Gallons) - 4,438.

(4) Material - French standard NFA 36 205, designation A 52 FP, Yield strength - 48,575 psi; Tensile strength - 73,950 psi.

(5) Tank Size (outside dia.) X (length) X (thickness)
(inches) 78.74 233.27 0.429(min.)

Head Thickness - 0.389 (min.)

Weld Joint Efficiency - 1.0

Corrosion Allowance - 0.0

Number of Baffles - 2

(6) Design Pressure (PSIG) - 197

Note: Design pressure means "maximum allowable working pressure (MAWP)" as used in the ASME Code.

(7) Test Pressure, Minimum (PSIG) - 295

(8) Openings - Two (2) - 7.5 inch diameter opening for the pressure relief devices on the top; one (1) - 24.4 inch diameter opening for the manhole on the head; one (1) - 8.3 inch diameter opening for the liquid phase valve and one (1) - 6.5 inch diameter opening for the vapor phase valve on the bottom. NOTE: Each bottom outlet valve must be provided with a shear section that meets the requirements of § 178.337-12.

(9) Tank surface area (square feet) - 441

(10) Pressure Relief Devices - Two (2) - 2 inch diameter spring loaded safety relief valves set at 197 psig. Total relief device capacity is 1,097,646 SCFH.

(11) G-Loadings: Vertical down 2 : Vertical up 2 :
Longitudinal 2 : and Transverse 2 .

(12) Maximum Gross Weight (pounds:) - 67,196

(13) Maximum Commodity Weight (pounds) - 54,233

(14) Tare Weight (pounds) - 12,963

(15) Design Specific Gravity - 1.46

(16) Design Temperature Range (°F) - -40 to 122

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b. TESTING -

(1) Hydrostatic test certificates for each tank must be maintained by the owner or manufacturer at its principal business office and be made available to any representative of the DOT upon request.

(2) A test report documenting a satisfactory ISO prototype test for this tank design must be on file with the OHMSPA prior to the first shipment.

(3) Each tank must be:

(i) Visually inspected prior to each trip to ensure that it has not been damaged on the previous trip; and

(ii) Retested and re-inspected once every five years in accordance with § 180.605 as prescribed for DOT Specification 51 portable tanks.

(4) For each portable tank, the manufacturer must prepare a certificate which must be signed by a responsible official of the manufacturer and an independent inspection agency certifying that the portable tank is designed and constructed in accordance with the ASME Code and this special permit. The certificate for the first portable tank fabricated must be submitted to the OHMSPA prior to the initial shipment.

c. OPERATIONAL CONTROLS -

(1) Each portable tank must be plainly marked on both sides near the middle, at least two inches high on a contrasting background, "DOT-SP 9490".

(2) No product may be shipped that has venting requirements exceeding 1,097,646 SCFH. The venting capacity required for each product must be determined by the flow formulas contained in Compressed Gas Association (CGA) pamphlet-S-1.2.

(3) The tank must be filled by weight in accordance with provision of § 173.315.

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(4) DOT-SP 9490 must be stamped on the metal manufacturer's data plate on the line which reads AU.S. Specification No.®.

(5) The construction of all portable tanks authorized by this special permit stated after January 1, 1986, must be in full conformance with the ASME Code including the "U" stamp.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo vessel.

10. MODAL REQUIREMENTS:

a. A current copy of this special permit must be carried aboard each cargo vessel or motor vehicle used to transport packages covered by this special permit.

b. Portable tanks may not be transported in container-on-flat car (COFC) or trailer-on-flat car (TOFC) service except under conditions approved by the Associate Administrator for Safety, Federal Railroad Administration.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

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- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) - 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS:

- a. Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.
- b. The owner of the tanks covered by this special permit must provide to the OHMSPA a list of all shippers who have shipped under this special permit and a shipping experience report every six months from the effective date of this special permit. The shipping experience report must contain approximate number of shipments made during the previous six months and any difficulties encountered.

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c. The holder or parties to this special permit, as identified in paragraph 1 above, must contact the OHMSPA immediately after any of the tanks covered by this special permit are sold to another party.

d. Shippers who ship under the terms of this special permit must report any incident involving loss of contents of the tanks described herein to the OHMSPA as soon as practicable.

Issued in Washington, D.C.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: TG